

10/579007

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1/6

## SEQUENCE LISTING

<110> THERION BIOLOGICS CORPORATION  
THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS  
REPRESENTED BY THE SECRETARY OF THE DEPARTMENT OF  
HEALTH AND HUMAN SERVICES

<120> SYSTEM FOR TREATING AND PREVENTING BREAST CANCER

<130> 700953-53661-PCT

<140> PCT/US04/037810

<141> 2004-11-12

<160> 6

<170> PatentIn Ver. 3.3

<210> 1

<211> 1548

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
nucleotide construct

<400> 1

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gtaccagtta	ctagaccagc	tttaggtagc	acagcacctc	ctgctcatgg	agtaactagt	360
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&lt;210&gt; 2

&lt;211&gt; 515

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
protein construct

&lt;400&gt; 2

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Met Thr Pro Gly Thr Gln Ser Pro Phe Phe Leu Leu Leu Leu Leu Thr
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Val Leu Thr Val Val Thr Gly Ser Gly His Ala Ser Ser Thr Pro Gly
      20           25           30

Gly Glu Lys Glu Thr Ser Ala Thr Gln Arg Ser Ser Val Pro Ser Ser
      35           40           45

Thr Glu Lys Asn Ala Val Ser Met Thr Ser Ser Val Leu Ser Ser His
      50           55           60

Ser Pro Gly Ser Gly Ser Ser Thr Thr Gln Gly Gln Asp Val Thr Leu
      65           70           75           80

Ala Pro Ala Thr Glu Pro Ala Ser Gly Ser Ala Ala Leu Trp Gly Gln
      85           90           95

Asp Val Thr Ser Val Pro Val Thr Arg Pro Ala Leu Gly Ser Thr Ala
      100          105          110

Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro
      115          120          125

Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr
      130          135          140

Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser
      145          150          155          160

Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala Pro Pro Ala His
      165          170          175

Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro Gly Ser Thr Ala
      180          185          190

Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr Arg Pro Ala Pro
      195          200          205

Gly Ser Thr Ala Pro Pro Ala His Gly Val Thr Ser Ala Pro Asp Thr
      210          215          220

Arg Pro Ala Pro Ala Ser Thr Leu Val His Asn Gly Thr Ser Ala Arg
      225          230          235          240

Ala Thr Thr Thr Pro Ala Ser Lys Ser Thr Pro Phe Ser Ile Pro Ser
      245          250          255

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His His Ser Asp Thr Pro Thr Thr Leu Ala Ser His Ser Thr Lys Thr  
 260 265 270  
 Asp Ala Ser Ser Thr His His Ser Thr Val Pro Pro Leu Thr Ser Ser  
 275 280 285  
 Asn His Ser Thr Ser Pro Gln Leu Ser Thr Gly Val Ser Phe Phe Phe  
 290 295 300  
 Leu Ser Phe His Ile Ser Asn Leu Gln Phe Asn Ser Ser Leu Glu Asp  
 305 310 315 320  
 Pro Ser Thr Asp Tyr Tyr Gln Glu Leu Gln Arg Asp Ile Ser Glu Met  
 325 330 335  
 Phe Leu Gln Ile Tyr Lys Gln Gly Gly Phe Leu Gly Leu Ser Asn Ile  
 340 345 350  
 Lys Phe Arg Pro Gly Ser Val Val Val Gln Leu Thr Leu Ala Phe Arg  
 355 360 365  
 Glu Gly Thr Ile Asn Val His Asp Val Glu Thr Gln Phe Asn Gln Tyr  
 370 375 380  
 Lys Thr Glu Ala Ala Ser Arg Tyr Asn Leu Thr Ile Ser Asp Val Ser  
 385 390 395 400  
 Val Ser Asp Val Pro Phe Pro Phe Ser Ala Gln Ser Gly Ala Gly Val  
 405 410 415  
 Pro Gly Trp Gly Ile Ala Leu Leu Val Leu Val Cys Val Leu Val Ala  
 420 425 430  
 Leu Ala Ile Val Tyr Leu Ile Ala Leu Ala Val Cys Gln Cys Arg Arg  
 435 440 445  
 Lys Asn Tyr Gly Gln Leu Asp Ile Phe Pro Ala Arg Asp Thr Tyr His  
 450 455 460  
 Pro Met Ser Glu Tyr Pro Thr Tyr His Thr His Gly Arg Tyr Val Pro  
 465 470 475 480  
 Pro Ser Ser Thr Asp Arg Ser Pro Tyr Glu Lys Val Ser Ala Gly Asn  
 485 490 495  
 Gly Gly Ser Ser Leu Ser Tyr Thr Asn Pro Ala Val Ala Ala Thr Ser  
 500 505 510  
 Ala Asn Leu  
 515

&lt;210&gt; 3

&lt;211&gt; 2106

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
nucleotide construct

&lt;400&gt; 3

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&lt;210&gt; 4

&lt;211&gt; 372

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
protein construct

&lt;400&gt; 4

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1           5           10           15

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Pro Glu Ile Gln Asn Thr Thr Tyr Leu Trp Trp Val Asn Asn Gln Ser
                20                25                30

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Leu Pro Val Ser Pro Arg Leu Gln Leu Ser Asn Asp Asn Arg Thr Leu  
 35 40 45  
 Thr Leu Leu Ser Val Thr Arg Asn Asp Val Gly Pro Tyr Glu Cys Gly  
 50 55 60  
 Ile Gln Asn Glu Leu Ser Val Asp His Ser Asp Pro Val Ile Leu Asn  
 65 70 75 80  
 Val Leu Tyr Gly Pro Asp Asp Pro Thr Ile Ser Pro Ser Tyr Thr Tyr  
 85 90 95  
 Tyr Arg Pro Gly Val Asn Leu Ser Leu Ser Cys His Ala Ala Ser Asn  
 100 105 110  
 Pro Pro Ala Gln Tyr Ser Trp Leu Ile Asp Gly Asn Ile Gln Gln His  
 115 120 125  
 Thr Gln Glu Leu Phe Ile Ser Asn Ile Thr Glu Lys Asn Ser Gly Leu  
 130 135 140  
 Tyr Thr Cys Gln Ala Asn Asn Ser Ala Ser Gly His Ser Arg Thr Thr  
 145 150 155 160  
 Val Lys Thr Ile Thr Val Ser Ala Glu Leu Pro Lys Pro Ser Ile Ser  
 165 170 175  
 Ser Asn Asn Ser Lys Pro Val Glu Asp Lys Asp Ala Val Ala Phe Thr  
 180 185 190  
 Cys Glu Pro Glu Ala Gln Asn Thr Thr Tyr Leu Trp Trp Val Asn Gly  
 195 200 205  
 Gln Ser Leu Pro Val Ser Pro Arg Leu Gln Leu Ser Asn Gly Asn Arg  
 210 215 220  
 Thr Leu Thr Leu Phe Asn Val Thr Arg Asn Asp Ala Arg Ala Tyr Val  
 225 230 235 240  
 Cys Gly Ile Gln Asn Ser Val Ser Ala Asn Arg Ser Asp Pro Val Thr  
 245 250 255  
 Leu Asp Val Leu Tyr Gly Pro Asp Thr Pro Ile Ile Ser Pro Pro Asp  
 260 265 270  
 Ser Ser Tyr Leu Ser Gly Ala Asp Leu Asn Leu Ser Cys His Ser Ala  
 275 280 285  
 Ser Asn Pro Ser Pro Gln Tyr Ser Trp Arg Ile Asn Gly Ile Pro Gln  
 290 295 300  
 Gln His Thr Gln Val Leu Phe Ile Ala Lys Ile Thr Pro Asn Asn Asn  
 305 310 315 320  
 Gly Thr Tyr Ala Cys Phe Val Ser Asn Leu Ala Thr Gly Arg Asn Asn  
 325 330 335

Ser Ile Val Lys Ser Ile Thr Val Ser Ala Ser Gly Thr Ser Pro Gly  
                   340                  345                  350

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Val Ala Leu Ile  
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<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
                   primer

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<210> 6

<211> 31

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Synthetic  
                   primer

<400> 6

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31